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ABSTRACT

A human ecology theoretical framework for the study of sexual differentiation in metropolitan area professional occupations is presented in this paper. Human ecology theory attempts to describe characteristics of organizations for a population as a whole. Differences in the characteristics of organizations among populations represent the fundamental human ecological problem. This theory describes sexual differentiation within occupations as a function of occupational organizations. The focus of sexual differentiation is occupational structure, since across populations individuals are differentially allocated to occupations (and industries), often on the basis of age, race, and sex. By using a human ecology research model, it is hoped that differences in organizations within metropolitan areas will explain, at least in part, variations in sexual differentiation. (MK)

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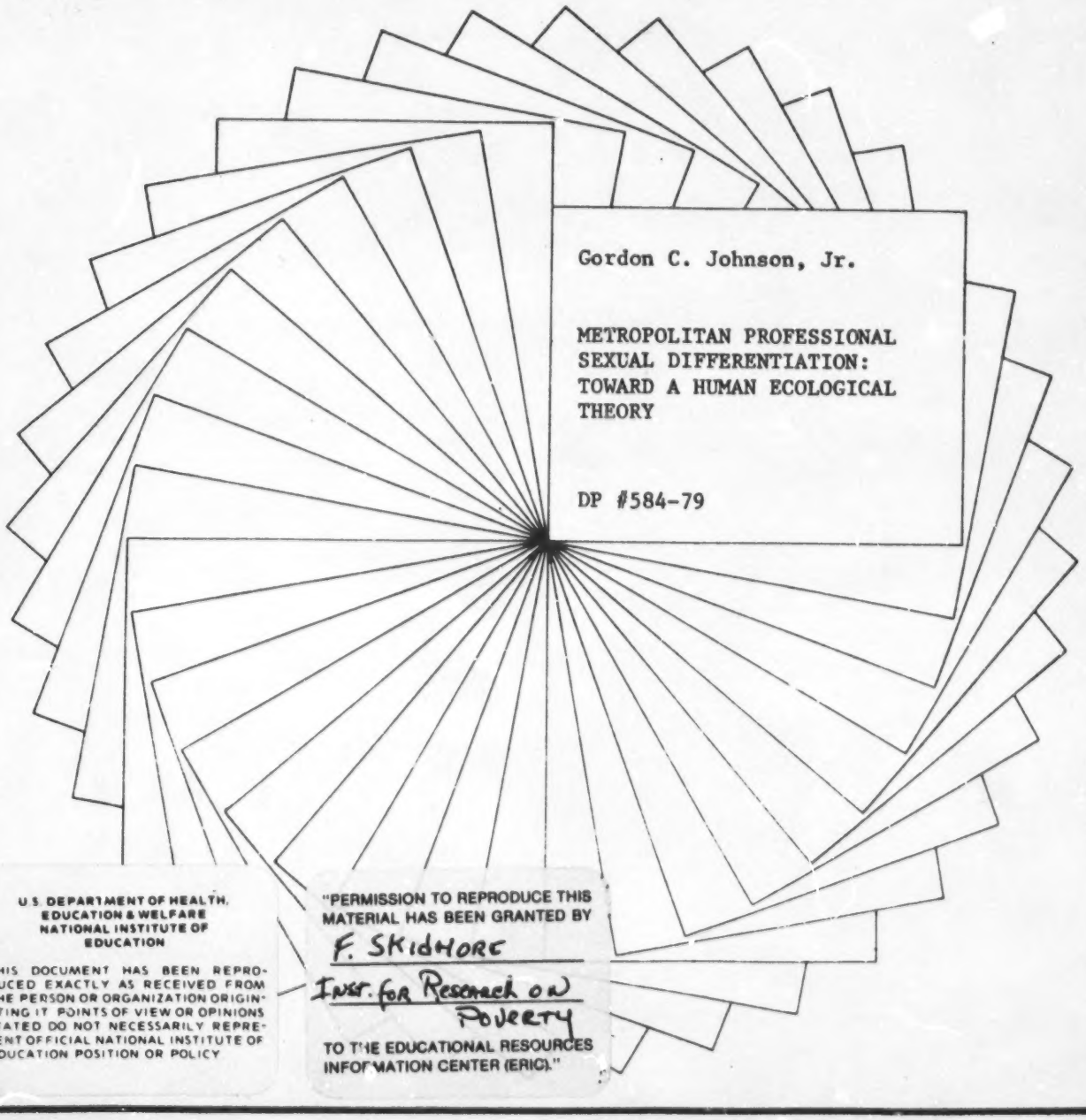

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Metropolitan Professional Sexual Differentiation:

Toward a Human Ecological Theory

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December 1979

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ABSTRACT

This paper argues that because of the failure, since the mid-sixties, to concentrate research on structural and ecological variables and sexual differentiation, a gap in knowledge exists which makes it difficult to stand variations in sexual representation in professional occupations in metropolitan areas. The central thesis, however, is that by focusing upon sexual disparities within functionally meaningful occupations, such as the universe of Census-defined professions, it is possible to improve understanding by studying sexual differentiation using the conceptual (and analytical) vantage point of contemporary human ecology. In developing this thesis, the assumptions and special foci of alternative theories of sex differences among occupational roles are descirbed and evaluated with reference to explaining metropolitan professional sexual differentiation, as are the key assumptions, concepts (and constructs), analytical foci, and research objectives of contemporary human ecology.

INTRODUCTION

Recently, a refreshing dialogue centered upon male-female participation differentials in the professions promises to refine available knowledge of the social processes underlying the complex patterns of sexual differentiation in occupations. To date, though, this discourse has benefited only modestly from the findings of contemporary human ecology. Thus a gap exists in the general understanding of sexual representation within the prestigious, high-status professions, and the available literature on sexual differentiation provides few analyses of the important structural relationships which are relevant to occupational differentiation between the sexes.

Although the issues are manifold and complex, I believe that the theoretical orientations and special methods of human ecology are well suited for the analysis of sexual differentiation. For one reason, there is a clear potential for comprehensiveness inherent within the human ecological perspective. Further, in line with Durkheim's famous postulate that "the determining cause of a social fact should be sought among the social facts preceding it," the ecological approach suggests structural correlates. In addition, the ecological literature contains theoretical and empirical statements which suggest that important relationships exist between the sustenance features of populations and their degree of sexual differentiation.

In this paper, our major preoccupation is with the specific empirical configurations of professional differentiation by sex (PDS) within the occupational structures of metropolitan areas of the United States in 1970, and with the theoretical implications of its variations. The

critical questions pursued are: What ecological characteristics of metropolitan areas can account for variations in the degree of sexual differentiation? What ecological features of metropolitan areas are associated with high or low degrees of professional sexual differentiation?

BACKGROUND

One important contemporary feminist objective is the full equality of the sexes. However, whether the advocations and efforts of feminists will eventually culminate in complete sexual equality--and not simply greater participation--in the work force remains an open and challenging question.[1] According to Lenski (1966), because "the occupational system constitutes the chief determinant of power, privilege and prestige for most members of industrial societies," status competition in the work force is keen. As a consequence, equality of any kind may be resisted, hence the assumption that providing equal opportunities will lead to equality in (occupational) fact may be erroneous. Yet to inform this issue, there has been a notable lack of systematic investigation of male-female occupational differentiation. Further, there are few coherent theoretical statements capable of accounting for existing variations in occupational differentiation by sex.

For instance, since the adoption in the United States in the mid-sixties of legislation (e.g., Title VII of the 1964 Civil Rights Act) prohibiting discrimination by sex (as well as by race, creed or ethnicity) in the screening and hiring of labor force participants, no assessment of the impact of that legislation on the character or intensity of sexual

differentiation in the labor force has appeared. In contrast, there are studies documenting the persistence of discrimination in the labor force and in the professions (Austin and Bayer, 1972; U.S. Dept. of Labor, 1970), which collectively raise the empirical question of whether or not the character of sexual differentiation has changed. Available studies that do focus on sexual differentiation (e.g., Gross, 1968; Martin and Poston, 1972; Poston, 1971; Poston and Johnson, 1971; and Williams, 1976, 1979) are only analyses of patterns which existed before the advent of these (presumably critical) statutes. These studies also predate the recent upsurge in the women's movement which has led some to posit "a new androgyny" for the nation (Schuck, 1974). Of course, there are studies that focus on the participation of <u>females</u> in the labor force,[2] but these for the most part merely specify the relevant structural-background[3] and sociopsychological factors affecting the participation of females in the labor force. Other studies of occupational differentiation have focused on racial differentials (Bahr and Gibbs, 1967; Glenn, 1963; Leiberson and Fuguitt, 1967; Price, 1968, 1969; and Turner, 1954).

Given the paucity of systematic research in occupational differentiation by sex, such evidence as there is suggests that past optimistic interpretations of increased equality of opportunity are questionable and even misleading. As Knudsen (1969) points out: "while there has been an important increase in the <u>number</u> of women employed in the professions"--a fact optimistically overemphasized by official government publications--"the <u>percentage</u> increase has been less than that of men. The female has neither displaced nor seriously challenged the American males' dominance in professional positions." These observations emphasize

the need for a more complete understanding of the factors affecting sexual differentiation in the labor force and validate the wisdom of simultaneously studying the occupation participation patterns of both sexes, i.e., studying sexual differentiation.

THE PROFESSIONS: THE LOCUS OF INITIAL STUDY

Although an inquiry into professional sexual differentiation is interesting in its own right, the professions themselves are a theoretically meaningful occupational group to study. Professional occupations are "special" occupations, which are unlike other occupational groups, in their relation to the overall division of labor, in their relations to their clientele, and in the relation of their own internal group dynamics to a profession's place in the community or nation (Krause, 1971: 75).

Carr-Saunders and Wilson (1933) defined the professions as possessing specialized intellectual skills and a body of theory acquired over a long period by those socialized and trained within them. Such professional groups are central and critical to an industrialized society, and all are high on scales of power, prestige, and reward. Yet not all groups high on these scales are professionals by elements of this definition alone. A second essential feature observed by Krause (1971) "lies in the crisis-relevant functions that they perform." A similar argument is made by Hughes (1958), who wrote "The life crises of others are their (the professionals') routine."

Of course, all other occupational groups have some attributes of the central professions, in different combinations and intensities. And like the professions, all occupations are subject to changes in work mandates, shifts in work rewards, and have some proclivity to adjust to

the unpredictable demands of chance socio-historical and technological transformations. One striking feature about the professions, however, is their continued persistence, for over two millenia, though they have often faced acute antiprofessional political hostilties, such as those associated with the widespread social ferment of the Jacksonian Era in the United States. They persist, Krause (1971) argues, because they serve individual and group needs which are basic during every period in history.

In the present research, it is assumed that the activity structure adopted by a population in pursuit of sustenance has basic consequences for that population, including its degree of sexual differentiation. Accordingly, in any worthwhile analysis of occupational sexual differentiation, it is important to examine functionally meaningful occupations. Since professional occupations display features that all other occupational groups aspire to, or evolve toward (Goode, 1961; Hall, 1968; Vollmer and Mills, 1966; Wilensky, 1964), any increase in understanding of the intricacies of sustenance structure and sexual differentiation in the professions may provide knowledge which is applicable also to less functionally powerful occupations or occupational groups.

An advanced technological society, moreover, has special needs for technology-based occupations that have not, classically, been considered "professions." The United States Bureau of the Census, for example, recognizes this need and classifies many technologically oriented occupations in the same occupation class as the "classic" professions under the broad category label "professional." Computer Programmers, for instance, Computer Systems Analysts, Airplane Pilots and Air Traffic Controllers are among the 111 "professional" occupation categories which the Bureau of the Census employed in 1970.

These technological occupations are also critical occupations, not by number of individuals, but by function. To assume these occupations are functionally powerful, or near key locations in the division of labor seems warranted; this is reflected in their political power, prestige, and material reward. And too, these occupations deal with basic individual and group needs, such that their absence spells immediate and long-term crises for individuals of the society and for the society itself. By studying the universe of Census-defined professions, therefore, attention is focused on sexual allocations in occupations which are functionally crucial to an industrialized society such as the United States.

ALTERNATIVE EXPLANATIONS OF SEXUAL DIFFERENTIATION

Human ecological theory offers a view of sexual differentiation which sharply contrasts with the main conceptualizations provided by the special emphases and analytical thrusts of other theoretical orientations. Of course, different theoretical insights will always result, depending on whether one is preoccupied with biological, behavioral, or cultural explanations, or whether demographic, economic, or human ecological generalizations are emphasized.

Biological

The natural biological differences between males and females exert <u>some</u> influence on differentiation of economic function (North, 1926: 46); hence the modal sex differences in biological attributes are often alluded to in explanations of sexual differentiation. But sexual performance of professional tasks has varied across cultures and societies, and transformations in the sex compositions of certain professions in

the same society are documented (Gross, 1968: 200). These facts pose critical limits to the applicability of a strictly biological thesis of sexual differentiation.[4]

Cultural

Cultural theories of sexual differentiation are similarly limited. Culture-based theories actually explain sexual differences in job allocation and performance in biological terms, i.e., on the basis of implied "natural" sex differences.[5] For instance, the cultural inheritance thesis argues that the assignment of occupations to either sex can be explained by reflecting upon the allocation of related tasks in preindustrial or preliterate societies. This prior allocation is, then, effectively maintained by the dynamics of cultural transmission and the adhesive nature of tradition.

Other explanations of sexual differentiation with a cultural frame of reference are also unconvincing. Some focus on subsistence economies (Brown, 1970; Murdock, 1957; Schmidt, 1955), and others upon family structure (Engles, 1891). But these explanations also depend on presumed physiological limitations, and cannot be regarded as appropriate points of departure for analysis of sexual differentiation in the professional occupations.

Behavioral

Behavioral theories address general value systems (Goode, 1963), stress the functional importance of sexual differentiation for societies in general (Dornbusch, 1966; Parsons, 1942), or relate differences in occupational involvement by sex to basic psychological needs (Holter, 1970). Of course, within the professional context, the image one

acquires of any specific professional occupation is likely to be molded by prior socialization (Epstein, 1970). And conceivably, this image can and does play an important role when members of either sex make critical career decisions. Some professions may be more appealing to an individual than others, or may potentially offer greater prestige, status, and general self-fulfillment. Different professions may be differentially assessed on these factors. Behavioral hypotheses have, then, some explanatory utility, but they have one notable drawback: they tend to presume the existence of observable distinctions in men's and women's work roles and, therefore, speak to factors that maintain these differences. Thus they tend toward mere description and only emphasize whatever sexual differences already exist.

Demographic Explanations

The professional labor force is extracted from a population base which continuously experiences change and alteration. This suggests that demographic variables may be pronounced and significant in explaining sexual disparities in professional occupations. Some demographic variables, of course, are clearly related--fertility is but one example. In general however, the demographic literature (Bancroft, 1958; Durand, 1946; Lebergott, 1958; Wolfbein and Jaffe, 1946) suggests that, by themselves, demographic variables explain little of the variation in sexual differentiation in professional occupations.

For instance, Durand (1948) examined the increase in the labor force participation of women between 1890 and 1940 and concluded that the combined effects of nativity, age, farm and nonfarm residency, marital status, and

dependency fail to explain the increases in the labor force involvement of women. In an earlier study, Wolfbein and Jaffe (1946) adjusted 1930 population data to the age, color, and nativity composition of the 1890 population and upon inspection of the 1930 adjusted rates found them to be lower than the actual rates. More recently, Lebergott (1958) reviewed these earlier studies, collected additional data to cover more recent years, and reported the same conclusions.

Bancroft's (1958) study built or Durand's (1948) analysis of the labor force. The study focused on the unprecedented economic and demographic events that had occurred since 1940, in age, farm and non-farm residence, marital status, fertility, houshold relationships, and education. Bancroft also concluded that "demographic changes account only in small part for the changes in labor force participation that took place in the United States between 1940 and 1950." In sum then, it would not appear wise to expect demographic variables (independently or combined) to account significantly for variations across metropolitan areas in professional sexual differentiation.

Economic Studies

Since demographic studies highlight the important role of propensity factors in determining the composition of the labor force (Bancroft, 1958: 42), they suggest that a review of economic studies might be fruitful. For one reason, economists study factors of "choice"; hence, economic factors might help explain why so few women choose professional occupations and why those women who do choose professions so frequently choose the typical "female" professions. Moreover, unlike some characteristics over which the individual has no control, for example, race, age, and

nativity, there are other factors that may be affected by individual decisions and that may be significant predictors of sexual differentiation in the professions. Fertility, residence, and level of living are a few examples. Economists assume that all such variables are determinable, at least in part, by economic predictors--and they are thus included, when appropriate, in their analyses (cf. Cain, 1966: 16).

Numerous economic analyses, therefore, are germane to this study. An impressive study by Long (1956) focused on the shifts to lighter work brought about by technological development and demand changes. Long illustrated that the home work of wives has been reduced by the increased production of "extrafamilial" goods and services and by the use of appliances, both of which have increased the propensity of women to leave the home for work in the larger external market.

Long's study stressed the importance of supply factors in increasing the participation rates of women in the labor force. Oppenheimer's (1970) more recent work, in contrast, called attention to the role of demand factors, such as the growth of employment opportunities for women; further, she argued for an important interaction between supply and demand factors. Her remarks were based on a long-term, comparative trend analysis of the female labor supply and the availability of female employment opportunities over the years 1900-1940.

An important relation between the income obtainable by female participation in the labor force and the actual choices women make concerning employment was also exposed by economic analyses (Cain, 1966; Mincer, 1962, 1966). Mincer pointed out, for example, that the choice one makes about employment is a three-way rather than a two-way choice. The choice is not simply between leisure and paid work, but also considers unpaid

home work. Thus, Mincer's analysis indicates that the labor force participation rates of married women are directly related to their earning power; the more a wife is capable of earning, the more likely it is that she will opt for paid work. Furthermore, the positive effect of a wife's earning power is much greater than the associated negative influence of her husband's earning power.

The analyses conducted by economists are particularly valuable, since they are concerned with empirically testable propositions about the propensity of women to participate in the labor force. No doubt, many of the relationships cited play some role in the degree to which the professions are characterized by sexual differentiation. Together, however, these analyses emphasize only the employment propensity of women.

Human Ecology

Beginning with the assumption that men and women survive by collectively exploiting their natural and social environments, human ecologists view sexual differentiation as a form of social differentiation, which is an attribute of the sustenance organization adopted by an aggregate of humans in response to various demographic, technological, and environmental pressures (Duncan and Schnore, 1959: 144). Within the ecological frame of reference, the structural properties of the studied social organization are always fundamental in importance, whether it is a small city, a rural country, metropolis, state, or an industrialized country. In this view, therefore, any of a number of demographic, technological or environmental characteristics of a metropolitan area may be examined

as determinants of differentiation by sex within professional occupations. Hence, the perspective of contemporary human ecology represents a potentially efficacious framework for the exploration of sexual differentiation.

THE HUMAN ECOLOGICAL APPROACH

A basic premise of contemporary human ecology is that the probability of survival, in any environment, improves for a population as it develops an effective, functionally integrated organization (Hawley, 1971: 11). It is further assumed that adaptation, vis-à-vis organization, is a collective phenomenon, not a function of the independent actions of individuals, and that a population develops a functionally integrated organization. Understanding how a population organizes itself in adapting to a constantly changing, yet restrictive, environment is the central research problem of contemporary human ecologists.

Contemporary human ecology is also concerned with the internal interdependence of populations, which develops along two axes--the symbiotic and the commensalistic. The former arises from structural differentiation and functional integration of specialized roles and functions within population systems, and is exemplified best by the division of labor. Symbiotic interdependence varies with the degree of differentiation and frequency of exchange among the specialized parts of any social system. Commensalistic interdependence stems from combinations of similar persons engaged in the same system task. Together, symbiotic and commensalistic interdependence form the basic structure of every social system; hence, from the standpoint of contemporary human ecology, they are the principal analytic units.

Contemporary human ecological theory also assumes that social systems exist as entities, and exhibit structural properties that can be examined apart from the characteristics of those individuals composing the system. Thus, contemporary human ecology operates at an exclusively "macro-sociological" level, by analyzing structure without respect to the attitudes and beliefs that individuals may entertain in their roles (Gibbs and Martin, 1959: 33). As a property of the aggregate, system structure is more important than the personal characteristics of individual actors.

Contemporary human ecologists also assume that, through continuous interaction, all component parts in social systems tend to move toward a state of equilibrium.

In analyzing stability and change, human ecologists focus on four constructs--population, organization, environment, and technology--that are viewed as reciprocally causal and functionally interdependent. And, in general, contemporary ecologists superimpose rather broad conceptualizations upon this set of constructs (see Duncan, 1959; Hawley, 1950: 12; Kasarda, 1973: 12).

Properly conceived, changes or transformations in any one of the general ecological variables will produce changes in the others. There have, in fact, been few attempts on the part of ecologists to interrelate systematically the components of the ecological complex (Sly, 1972: 617) though some (Duncan and Schnore, 1959; Sly, 1972) suggest that any of the four may serve as dependent or independent variables. In most ecological studies, organization is the dependent variable. In fact, Gibbs and Martin (1959), and to some degree Hawley (1950), argued that organization alone is the proper dependent variable, and this view will

be adopted in this discussion of the organizational aspects of professional sexual differentiation.

Two additional ecological concepts must be considered.

Sustenance activities. The technological apparatus commanded by a population and the demands of its environment set limits for its organizational structure, and give rise to unique constellations of survival or sustenance activities. These, in turn, constitute the foundations of their more general occupational and industrial distinctions (Browning and Gibbs, 1971: 234), and are abstracted from the universe of human behavior, excluding nonlivelihood activities (Gibbs and Martin, 1959).

Sustenance organization. The ultimate aim of human ecology is to describe the characteristics of sustenance organization for a population as a whole (Gibbs and Martin, 1959). An outstanding property of sustenance activities is that "they are highly organized in the sense of being regular, repetitive and enduring." Any pattern in sustenance activities constitutes an organization, and the organization made manifest may involve one person (noncollective) or several persons (a collective sustenance organization). However, a sustenance organization is not a collectivity of individuals, but an aggregate effect of the activities of individuals.

Differences in the character of sustenance organizations among populations represent the fundamental human ecological problem. Explaining the presence and absence of particular characteristics of sustenance organizations (i.e., specifying conditions of occurrence) and ascertaining their correlative consequences for human populations, in that order, are human ecology's two foremost explanatory goals (Gibbs and Martin, 1959).

In research on professional sexual differentiation, the ultimate goals are to delineate the unique characteristics of metropolitan sustenance organization and to assess their influence. This, of course, constitutes a straightforward ecological undertaking, for the rationale linking sustenance organization and sexual differentiation can be directly delineated. (I shall not do so here, since the requisite exposition is beyond the scope of this paper, which is confined to an explication of essential theoretical antecedents.) It remains useful, nevertheless, to specify professional sexual differentiation as an aspect of differentiation in sustenance organization.

Professional sexual differentiation. The way in which sustenance activities are organized in a population is revealed through an examination of its aggregate occupational structure (Duncan and Schnore, 1959), because across populations individuals are differentially allocated to occupations (and industries), often on the basis of ascribed statuses, typically age, caste, race, sex, etc. Each of these status dimensions may be considered equally relevant for understanding the complex nature of sustenance activities, and each may take a form described and determined by any of several distinct status characteristics.

In some circles, the notion of differentiation is associated with social interaction (Svalgastoga, 1965), since the two opposing tendencies of social differentiation and social integration are given equal impetus as processes by the more basic process of social interaction. Social integration brings about mutual attractions, dependence and compatibility among a society's members, whereas social differentiation creates tendencies toward social, as opposed to biological, differences. Several variations on this main theme have been recorded (North, 1926), one of

which is occupational differentiation. Occupational differentiation by sex, therefore, must be conceptualized as but one specific form of social differentiation.

Though there is an important distinction, differentiation in any form seems conceptually close to the notion of a division of labor. Concern with differentiation in participation in sustenance activities is a concern with the social basis of the division of labor, i.e., with characteristics of individuals, in conjunction with their sustenance activities. In contrast, the concept of a division of labor in a population refers not to individual attributes, but to the differences among individuals with respect to their sustenance activities (Gibbs and Poston, 1975). Enumerating, therefore, the number of different occupations in a given population constitutes an elementary assessment of the division of labor, but ascertaining the extent of ascribed status differentiation across occupations is a different, and somewhat more complex endeavor (Gibbs and Martin, 1962).

Professional differentiation by sex, then, refers to the extent to which males and females have unlike distributions in the professional labor force, and is unlike sexual prejudice (or discrimination). The former, of course, is a social fact; the latter, in contrast, is rooted in individuals (Gibbs, 1965).

DISCUSSION AND CONCLUSION

The conception of professional sexual differentiation as an elemental feature of metropolitan sustenance organization and as an appropriate dependent (organizational) variable within the framework of the human

ecological approach provides a sound basis for assembling and evaluating the alternative theoretical "explananda" of various disciplines. And this procedure reveals that sexual differentiation is likely to be influenced, to some degree, by many of the factors that the alternative theoretical orientations suggest. Because human ecology, as we earlier noted, is primarily rather than secondarily concerned with the organizational characteristics of human populations, the domain of inquiry may be safely circumscribed to alone include the special characteristics of metropolitan (sustenance) organization.

By using, therefore, a preliminary research strategy which focuses on this crucial aspect of social systems and professional sexual differentiation, these two important structural features of metropolitan systems can be approached in specific and theoretically meaningful terms--a tact which complements human ecology's attempt to be a generalizing science, since, in turn, it will result in more specific and theoretically meaningful findings. Moreover, the structure of metropolitan sustenance organization (including the character of professional sexual differentiation) will be described neither exclusively in economic nor in other discipline-oriented terms, but according to certain types of basic social relationships (see Gibbs and Martin, 1959: 35). Above all, as the preceding overview of the different explanations of sexual differentiation and human ecology makes clear, the human ecological approach will generate testable (and generalizable) theoretical and empirical statements which will be useful for bridging the gap in knowledge of professional sexual differentiation.

Though exact implications are always difficult and treacherous to specify <u>a priori</u>, and even though their full exposition and empirical

resolution must be put over into a later report, some speculation concerning the expected consequences of characteristics of metropolitan sustenance structure for professional sexual differentiation may here be advanced.

As stated previously, the concept of sustenance organization assumes a key role in human ecological theory. In addition, a few prominent ecologists argue that "the presence or absence of certain forms of sustenance organization in a population may determine the presence or absence of other forms of sustenance organization" (Gibbs and Martin, 1959: 33).

Few studies exist which examine the interrelationships of two or more attributes of a population's sustenance organization, and there are even fewer studies regarding sustenance organization and professional sexual differentiation. Nonetheless, it remains plausible that a significant relationship exists between the kinds of sustenance functions which are characteristic of metropolitan populations and their corresponding degree of professional differentiation by sex.

For instance, associated with certain industries there is typically an underabundance or overabundance of either male or female occupational opportunities (Bowen and Finegan, 1969; Epstein, 1970; Leser, 1958; McKenzie, 1926). Further, since variations among populations in industry structure imply variations in occupational structure (Galle, 1963), the alternative consequences of occupational structure for sexual differentiation may in part be due to differences in industry structure. However, since industry structure is but one manifestation of a more generic structure of sustenance activities, an important link is suggested between the sustenance structure of a population and its degree of sexual differentiation.

Our main theoretical anticipation, therefore, is that the differences in sustenance structures among metropolitan areas will explain, at least in part, variations in sexual differentiation. Furthermore, given the potential which exists for identifying a variety of types of sustenance activities for population aggregates, we do not expect that all types or components of sustenance activities will have the same precise impact on professional sexual differentiation. However, unless (and until) these theoretical expectations can be empirically verified, it is unacceptable to claim any advances in comprehending the fundamental social processes which influence professional sexual differentiation. But, if our expectations are verified, we will, of course, have better knowledge of those characteristics of the sustenance structure in metropolitan areas which have important consequences for professional sexual differentiation and a new understanding of the way ecological factors influence the social structures of human communities.

NOTES

[1]Separate from the possibility of equal access to occupations is the issue of whether equality is, from the standpoint of women, wholly desirable (Ferriss, 1971: 115).

[2]See Baker, 1964; Bancroft, 1958: 108-130; Denti, 1968; Dornbusch and Heer, 1957; Durand, 1946; Epstein, 1970; Farrag, 1964; Garfinkle, 1967; Jaffe, 1956; Kelsall and Mitchell, 1959; Lebergott, 1964: 104-105; 1968: 56-73; Leevy, 1943; Leser, 1958; Oppenheimer, 1967, 1970; Smuts, 1959, 1960; Sweet, 1970; Turner, 1951.

[3]The term "structural" does not carry a consistent implication. This term may refer to features that describe an individual's achieved status, as for example, "level of education attained," or it may refer to key status relationships which have important social consequences for the individual, such as "husband's annual income" (Dowdall, 1974). Here, it is used to call attention to characteristics of aggregates or total populations, in keeping with the connotations of ecologists.

[4]The distributions of males and females in specific professions are not similar by any standard in many international comparisons. And the frequently cited transformation in sexual composition of the great majority of clerical and sales occupations in the United States provides an illuminating example as well.

[5]Such a biological proposition, while not explicitly stated in most cultural explanations, is clearly implied.

REFERENCES

Astin, H.S. and Bayer, A., 1972. Sex discrimination in academe. Educational Record, 53, 101-118.

Bahr, M.H. and Gibbs, J.P. 1967. Racial discrimination in American metropolitan areas. Social Forces, 45, 521-532.

Baker, E.F. 1964. Technology and woman's work. New York: Columbia University Press.

Bancroft, G. 1958. The American labor force: Its growth and changing composition. New York: Wiley and Sons, Inc. (For the Social Science Research Council in cooperation with the U.S. Bureau of the Census.)

Bowen, W.C. and Finegan, T.A. 1965. Labor force participation and unemployment. In A.M. Ross (ed.), Employment policy and the labor market. Berkeley: University of California Press.

Brown, J.K. 1970. A note on the division of labor by sex. American Anthropologist, 72, 1074-1078.

Browning, H.L. and Gibbs, J.P. 1971. Intraindustry division of labor: The states of Mexico. Demography, 8, 233-245.

Cain, G.G. 1966. Married women in the labor force: An economic analysis. Chicago: University of Chicago Press.

Carr-Saunders, A.M. and Wilson, P.A. 1933. The professions. Oxford: Clarendon Press.

Denti, E. 1968. Age-sex patterns of labor force participation by urban and rural populations. International Labor Review, 98, 525-550.

Dornbush, S.M. 1966. Afterword. In Eleanor E. Maccoby (ed.), The development of sex differences. Stanford, California: Stanford University Press.

Dornbush, S.M. and Heer, D.M. 1957. The evaluation of work by females. American Journal of Sociology, 63, 27-29.

Duncan, O.D. 1959. Human ecology and population studies. In P.M. Hauser and O.D. Duncan (eds.), The study of population. Chicago: The University of Chicago Press.

Duncan, O.D. and Schnore, L.F. 1959. Cultural, behavioral, and ecological perspectives in the study of social organization. American Journal of Sociology, 65, 132-153.

Durand, J.D. 1946. Married women in the labor force. American Journal of Sociology, 52, 217-223.

-----. 1948. The labor force in the United States, 1890-1960. New York: Social Science Research Council.

Engels, F. 1891. The origin of the family, private property and the state. In Karl Marx and Frederick Engels: Selected Works, 3, 191-334. Moscow: Progress Publishers, 1970.

Epstein, C.F. 1970. Women's place: Options and limits in professional careers. Berkeley: University of California Press.

Farrag, A.M. 1964. The occupational structure of the labor force. Population Studies, 18, 17-34.

Ferris, A.L. 1971. Indicators of trends in the status of American Women. New York: Russell Sage Foundation.

Galle, O.R. 1963. "Occupational composition and the metropolitan hierarchy: The inter-and intra-metropolitan division of labor." American Journal of Sociology. 69 (November): 260-269.

Garfinkle, S.H. 1967. Work life expectancy and training needs of women. Manpower Report, 12. Washington, D.C.: U.S. Department of Labor.

Gibbs, J.P. 1965. Occupational differentiation of negroes and whites in the United States. Social Forces, 44, 159-165.

------ and Martin, W,T. 1959. Toward a theoretical system of human ecology. Pacific Sociological Review, 2, 29-36.

------ and Posten, D.L. 1975. The division of labor: Conceptualization and related measures. Social Forces, 53, 468-476.

Glenn, N.D. 1963. Some changes in the relative status of American nonwhites. Phylon, 24, 109-122.

Goode, W.J. 1961. The librarian: From occupation to professional? The Library Quarterly, 31, 206-318.

------. 1963. World revolution and family patterns. New York: The Free Press of Glencoe.

Gross, E. 1968. Plus Ca Change...? The sexual structure of occupations over time. Social Problems, 16, 198-208.

Hall, R.H. 1968. Professionalization and bureaucratization. American Sociological Review, 33, 92-104.

Hawley, A. 1950. Human ecology: A theory of community structure. New York: The Ronald Press.

------. 1971. Urban society: An ecological approach. New York: The Ronald Press.

Holter, H. 1970. Sex roles and social structure. Oslo, Norway: University Press.

Hughes, E.C. 1958. Work and the self. In Men and their work. New York: The Free Press.

Jaffe, A.J. 1956. Trends in the participation of women in the working force. Monthly Labor Review, 79, 559-565.

Kasarda, J.D. 1973. The ecological approach in sociology. Paper presented at the annual meetings of the Southwestern Social Science Association. Dallas, Texas, March 22-24.

Kelsall, R.K, and Mitchell, S. 1959. Married women and employment in England and Wales. Population Studies. 13 (July): 19-33.

Knudsen, D.D. 1969. The declining status of women: Popular myths and the failure of functionalist thought. Social Forces, 48, 183-193.

Krause, E.A. 1971. The sociology of occupations. Boston: Little, Brown and Company.

Lebergott, S. 1958. Population change and the supply of labor. In Demographic and Economic Change in Developed Countries, National Bureau of Economic Research. Princeton: Princeton University Press.

-----. 1964. Manpower in economic growth: The American record since 1800. New York: McGraw-Hill.

-----. 1968. "Labor force and employment trends." In Eleanor Bernest Sheldon and Wilbert E. Moore (eds.), Indicators of social change: Concepts and measurements. New York: Russell Sage Foundation. Pp. 97-143.

Leevy, J. R. 1943. The modern industrial working woman. American Sociological Review, 8, 720-722.

Leiberson, S. and Fuguitt, G.V. 1967. Negro-white occupational differences in the absence of discrimination. American Journal of Sociology, 73, 188-200.

Lenski, G.E. 1966. Power and privilege. New York: McGraw-Hill.

Leser, C.E.V. 1958. Trends in women's work participation. Population Studies, 12, 100-110.

Long, C. 1958. The labor force under changing income and employment. Princeton: Princeton University Press. (National Bureau of Economic Research.)

Martin, W.T. and Poston, D.L. Jr. 1972. The occupational composition of white females: Sexism, racism, and occupational differentiation. Social Forces, 50, 349-355.

McKenzie, Roderick D. 1926. The scope of human ecology. American Journal of Sociology, 32, 141-154.

Mincer, J. 1962. Labor force participation of married women. Paper in the National Bureau of Economic Research volume, Aspects of labor economics. Princeton: Princeton University Press.

------. 1966. Labor force participation and unemployment: A review of recent evidence. In R.A. Gordon and M.S. Gordon (eds.), Prosperity and unemployment. New York: Wiley and Sons.

Murdock, G.P. 1957. World ethnographic sample. American Anthropologist, 59, 664-687.

North, C.C. 1926. Social differentiation. Chapel Hill: The University of North Carolina Press.

Oppenheimer, V.K. 1967. The interaction of demand and supply and its effect on the female labor force in the United States. Population Studies, 21, 239-259.

-----. 1970. The female labor force in the United States: Demographic and ecnomic factors governing its growth and changing composition. Berkeley: University of California, Institute of International Studies.

Parsons, T. 1942. Age and sex in the social structure of the United States. American Sociological Review, 7, 604-616.

Poston, D.L. 1971. The impact of industrialization on occupational differentiation of sex in the United States: An ecological interpretation. Paper presented at the annual meetings of The Society for the Study of Social Problems, August, 1971.

——, and Johnson, G.C. 1971. Industrialization and professional differentiation by sex in the metropolitan southwest. Social Science Quarterly, 52, 331-348.

Price, D.O. 1968. Occupational changes among whites and nonwhites, with projections for 1970. Social Science Quarterly, 49, 563-572.

——. 1969. Changing characteristics of the Negro population. Washington, D.C.: U.S. Government Printing Office. (A 1960 Census Monograph.)

Schmidt, W.S.V.D. 1955. Das Mutterrecht. Studia Institute Anthropos 10. Vienna-Modlingen: Missionsdruckerei St. Gabriel.

Schuck, V. 1974. Sexism and scholarship: A brief overview of women, academia, and the disciplines. Social Science Quarterly, 55, 563-585.

Sly, D. 1972. Migration and the ecological complex. American Sociological Review, 37, 615-628.

Smuts, R.W. 1959. Women and work in America. New York: Columbia University Press.

——. 1960. The female labor force: A case study in the interpretation of historical statistics. Journal of American Statistical Association 55, 71-79.

Svalastoga, K. 1965. Social Differentiation. New York: David McKay Co., Inc.

Sweet, J.A. 1951. The nonwhite female in the labor force, American Journal of Sociology, 56, 438-447.

——. 1970. Family composition and the labor force activity of American wives. Demography, 7, 195-209.

Turner, R.H. 1954. Occupational patterns of inequality. American Journal of Sociology, 59, 437-447.

U.S. Department of Labor. 1970. Sex discrimination in employment practices. Washington, D.C.: U.S. Government Printing Office.

Vollmer, H. and Mills, D.I. 1968. Professionalization. Englewood Cliffs, N.J.: Prentice-Hall Inc.

Wilensky, H.L. 1964. The professionalization of everyone? American Journal of Sociology, 60, 137-158.

Williams, J.G. 1976. Trends in occupational differentiation by sex. Sociology of Work and Occupations, 3, 38-62.

-----. 1979. The changing U.S. labor force and occupational differentiation by sex. Demography, 16, 73-87.

Wolfbein, S.L. and Jaffe, A.J. 1946. Demographic factors in labor force growth. American Sociological Review, 11, 392-396. Reprinted in Joseph J. Spengler and Otis D. Duncan (eds.), Demographic Analysis. New York: The Free Press.